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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/786,340	02/25/2004	Hyung-Joon Kim	YOU101	4561
7590 Donald J. Perreault Grossman, Tucker, Perreault & Pfleger, PLLC 55 South Commercial Street Manchester, NH 03101			EXAMINER ZHU, WEIPING	
			ART UNIT 1793	PAPER NUMBER
			MAIL DATE 08/12/2008	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/786,340

**Applicant(s)**

KIM ET AL.

**Examiner**

WEIPING ZHU

**Art Unit**

1793

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 04 August 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1, 3-13 and 15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 3-13 and 15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Status of Claims***

1. Claims 1, 3-13 and 15 are currently under examination, wherein no claim has been amended in applicant's amendments filed on June 16, 2008.

### ***Status of Previous Rejections***

2. The previous rejections of claims 1, 3-13 and 15 under 35 U.S.C. 103(a) and previous provisional rejections of claims 1, 3-13 and 15 on the ground of nonstatutory obviousness-type double patenting as stated in the Office action dated December 14, 2007 have been maintained.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 5-13 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 99142638 in view of Kucera et al (US 2003/0075245 A1) as stated in the Office action dated December 14, 2007. Since WO 99142638 is in Japanese, the examiner relies on the corresponding US patent Kanai et al. ('245 A1) et al. (US 6,607,587 B1) to establish the rejection ground.
4. Claims 3-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kanai et al. ('245 A1) in view of Kucera et al ('245 A1) and further in view of Thompson et al. (US 4,684,507) as stated in the Office action dated December 14, 2007.

5. Claims 1, 5-13 and 15 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-17 of copending Application No. 10/786,379 (App ('379)), corresponding US PGPUB 2005/0186347 A1 in view of Thompson et al. ('507) as stated in the Office action dated December 14, 2007.

***Response to Arguments***

6. The applicant's arguments filed on June 16, 2008 have been fully considered but they are not persuasive.

First, the applicant argues that Kanai et al. ('245 A1)'s disclosure starts and stops with thiocarbonyl compounds and critically relies upon the chelating features of such unsaturated functional group with a given metal surface; Kucera et al ('245 A1) does not teach that one may simply substitute the thiourea taught by Kanai et al. ('245 A1) with a thiocarbamate or a dithiocarbamate for use as a chelating agent; rather Kucera et al ('245 A1) teaches that such substitutions can be made because the groups are nitrogen containing and the nitrogen containing functional groups provide reactive hydrogen as a reaction enabling moiety; and one would not modify Kanai et al. ('245 A1) with the teaching of Kucera et al ('245 A1) as a reasonable expectation of success is not present giving the teaching of Kanai et al. ('245 A1). In response, the examiner notes that Kanai et al. ('245 A1) discloses that a compound having a thiocarbonyl group (I) is preferably one having a nitrogen or oxygen ion simultaneously as in Formula (II). Since the nitrogen or oxygen atom in such compounds also form a coordinated bond with a metal surface of zinc or aluminum, a thiocarbonyl compound, especially one having the both

atoms simultaneously, readily undergoes the formation of a chelate bond on the zinc or aluminum, whereby achieving a more firm adsorption of the thiocarbonyl compound on the zinc surface (col. 3, line 55 to col. 4, line 13). It would have been obvious to one of ordinary skill in the art that the nitrogen containing groups as disclosed by Kucera et al ('245 A1) (paragraph [0069]) comprising thiourea, thiocarbamate and dithiocarbamate groups would have the same functions as desired by Kanai et al. ('245 A1). Therefore, the ground of rejection based on the functional equivalence of the nitrogen containing groups of Kucera et al ('245 A1) as stated in the Office action dated December 14, 2007 is proper and maintained. An expectation of success for the substitution would obviously be present.

Second, the applicant argues that the addition of Thompson et al. ('507) does not render obvious the instantly claimed invention because Thompson et al. ('507) discloses neither that the organosulfur compound is dissolved in a solution in which the polymeric resins are dissolved nor that the organosulfur compound is mixed with the polymeric resin as recited in the instant claims 1 and 12 as stated in the previous response filed on October 23, 2007. In response, the examiner notes that the grounds of the rejections of these limitations rely on the teachings of Kanai et al. ('245 A1) rather than Thompson et al. ('507) as discussed above and in the Office action dated December 14, 2007 respectively.

### ***Conclusion***

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Weiping Zhu whose telephone number is 571-272-6725. The examiner can normally be reached on 8:30-16:30 Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on 571-272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Roy King/  
Supervisory Patent Examiner, Art  
Unit 1793

WZ

8/4/2008

**Application Number****Application/Control No.**

10/786,340

**Examiner**

WEIPING ZHU

**Applicant(s)/Patent under  
Reexamination**

KIM ET AL.

**Art Unit**

1793